

APPARATUS, SYSTEMS AND RELATED METHODS FOR DISPENSING AND/OR EVALUATING DRY POWDERS

Abstract

Methods, systems, and computer program products flowably dispense meted
5 amounts of dry powders using a flexing piezoelectric layer to transmit a vibratory
signal to the dry powder to facilitate fluidic flow through a flow channel. The
apparatus for dispensing dry powders can include: (a) an elongate flow channel
having a width, length, and depth, the flow channel having axially spaced apart inlet
and outlet ports, wherein the elongate flow channel is configured to extend in an
10 angular orientation of between about 10-75 degrees relative to the axial direction of
flow; (b) a flexible piezoelectric layer configured to overlie the flow channel so that,
in operation, the piezoelectric layer is able to flex upwardly away from the lowermost
portion of the underlying flow channel; and (c) a signal generator operatively
associated with the piezoelectric layer, wherein, in operation, the signal generator is
15 configured to output a signal for flexing the piezoelectric layer in the elongate flow
channel.